



The Current serves Hawaii's businesses and policy makers in making informed decisions about clean energy investments and policy. Hawaii's clean energy sector is a significant driver for economic development to replace fossil fuel expenditures with home-grown industries that generate revenue and create high-paying jobs for local residents.

SHAPING HAWAII'S CLEAN ENERGY FUTURE MARK GLICK, ENERGY ADMINISTRATOR



The summer is proving to be an active one for those involved in shaping Hawaii's clean energy future. This issue of The Current highlights two major developments in the effort to reduce our dependence on imported oil:

Enactment of the nation's first 100 percent renewable portfolio standard for the electricity sector, and the release of an in-depth analysis commissioned by the HSEO that will help guide Hawaii's efforts to cut the consumption of petroleum-based fuels in the transportation sector.

Establishing the 100 percent RPS fulfills Governor Ige's policy objective to set the electricity sector on a fully renewable path, while keeping Hawaii on the forefront of clean energy innovation. Meanwhile, the analysis conducted by the International Council on Clean Transportation will provide the basis for the development of a transportation roadmap that will ensure that Hawaii's energy transformation is comprehensive, inclusive, and successful. The Hawaii State Energy Office is excited about working with an ever-widening group of stakeholders who are committed to moving us closer toward achieving our clean energy goals.

OUR CLEAN ENERGY VISION

The Hawaii State Energy Office (HSEO) will transform Hawaii's economy by growing the clean energy sector. To this end, HSEO works to stimulate the deployment of clean energy infrastructure and serve as a catalyst for energy innovation and test bed investments. In doing so, HSEO will lead the charge in achieving 100 percent renewable energy by 2045, and exceeding the target of 4,300 gigawatt hours of savings by 2030.

LEADING THE CHARGE

100% Renewable Energy by 2045

Hawaii continues to lead the way in renewable energy generation, having recently set historic legislation to achieve 100% renewable by 2045. Pursuing energy independence and transitioning off fossil fuels will stimulate economic growth and deliver cost-effective energy that is environmentally friendly.

Petroleum on the Ground, in the Air, Over the Wire

In contrast to the mainland, where most petroleum is used for ground transportation, Hawaii uses roughly equal amounts of petroleum for electricity production, ground transportation, and commercial aviation.

Fuel Fossils

Hawaii is the only state that depends so heavily on petroleum for our energy needs. Whereas the nation as a whole relied on oil for less than 1 percent of its electricity in 2013, Hawaii relied on oil for 70 percent of our electricity, with 14 percent coming from coal.



**100% RENEWABLE
ENERGY BY 2045**



**PETROLEUM ON
THE GROUND, IN
THE AIR, OVER
THE WIRE**



FUEL FOSSILS

FEATURED STORY: LESS GUZZLING – FINDINGS FOR FOSSIL FUEL CUTS IN TRANSPORTATION

Hawaii's efforts thus far in reducing Hawaii's dependence on fossil fuels have focused largely on power generation. However, with transportation accounting for two-thirds of Hawaii's oil consumption, the ***Hawaii Clean Energy Initiative charrettes program*** has made transportation issues a top priority. In this effort, HSEO has enlisted input from key stakeholders and a world-class partner, the International Council on Clean Transportation (ICCT). ICCT was hired to carry out the analysis, convene stakeholders, and develop a new set of actionable tactics to reduce petroleum-based fuels in the transportation sector.

The HCEI draft Transportation Energy Analysis Report includes nearly two dozen tactics to be pursued now as well as enabling actions and further analysis to develop a larger pipeline of petroleum reducing tactics to be pursued in the long term. The next step will feature a reconvening of stakeholders to collaborate on development of a transportation roadmap that will most certainly be a major focus of HCEI for many years to come. Below are recommended tactics, which in total are projected to save tens of millions gallons of gasoline per year (MGY) by 2030.

TACTICS FROM HCEI TRANSPORTATION ANALYSIS



Improve Vehicle Efficiency

- Procure EVs and efficient vehicles for public fleets
- Vehicle fuel economy standards
- Green freight
- Vehicle retirement incentives for low-income groups
- High efficiency taxis
- Rental car efficiency program



Reduce Vehicle-miles traveled

- Transit-oriented development
- Expand infrastructure for alternative transportation modes including bicycling, walking and public transit
- Car sharing for public fleets
- Dedicated parking for car sharing
- Commuter benefits legislation
- Support TDM by large employers
- Telecommuting by public employees
- Flexible scheduling for work and classes



Promote Electric-drive vehicles

- State rebates for electric-drive vehicles
- EV rental prioritization for state & county employees
- Extend time-of-use and EV charging rates to all EV customers



Streamline Aviation

- Financial support for winglet retrofits
- Airport infrastructure support



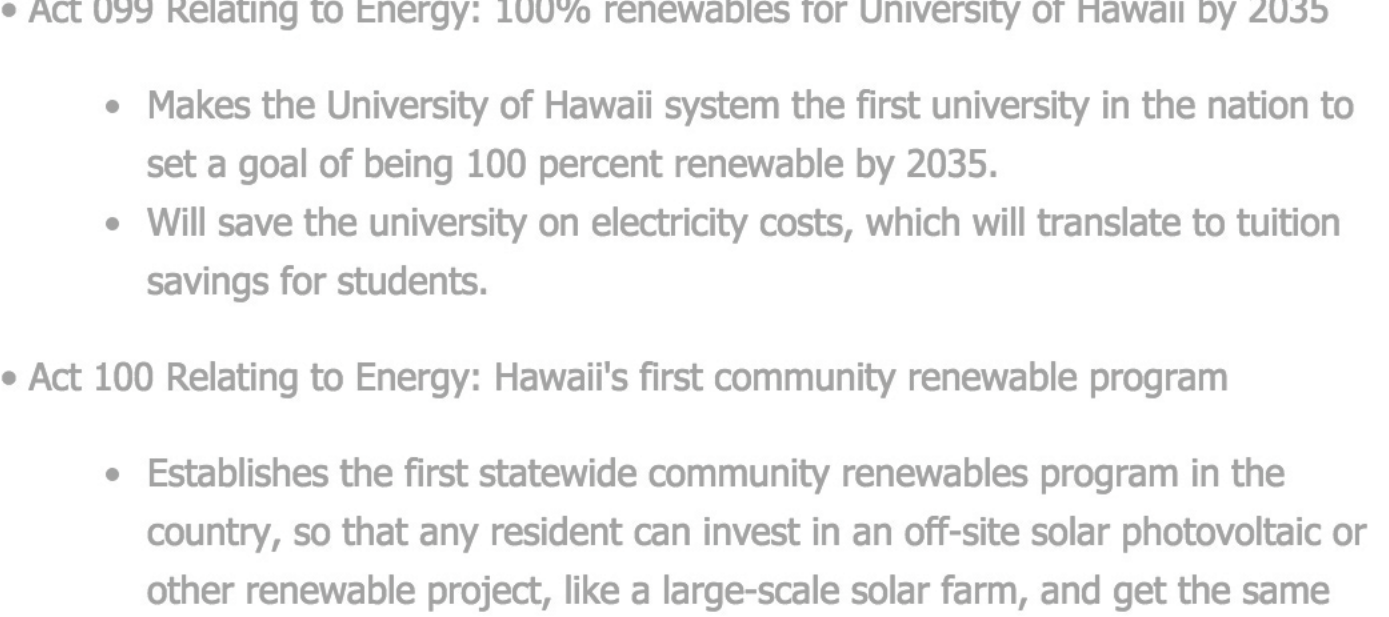
Modify Marine Transport

- Slow steaming
- Propeller polishing and hull cleaning

To bring these improvements to fruition, the report recommends interagency and private sector collaboration with the participation and coordination of renewable energy stakeholders.

[Learn more about the Transportation Charette.](#)

FEATURED STORY: RENEWABLE ENERGY EFFORTS PUT HAWAII FIRST



Energy Legislation

Governor David Ige recently signed three landmark energy bills into law, fulfilling a major policy objective to put Hawaii at the forefront of renewable energy efforts nationwide.

"As the most oil dependent state in the nation, Hawaii spends roughly \$5 billion a year on foreign oil to meet its energy needs. Making the transition to renewable, indigenous resources for power generation will allow us to keep more of that money at home, thereby improving our economy, environment, and energy security," Ige said.

Ige also thanked the Hawaii senate and house energy committee chairs for championing these bills.

- Act 097 Relating to Renewable Standards: 100% renewables for the state by the end of 2045
 - Makes Hawaii the first state in the nation to adopt a 100 percent renewable energy portfolio.
 - Increases Hawaii's renewable energy goals to 30 percent renewable by the end of 2020, 40 percent by 2030, 70 percent by 2040 and 100 percent by 2045. Currently 21 percent of our power comes from renewable energy.
 - Will save ratepayers hundreds of millions of dollars.
- Act 099 Relating to Energy: 100% renewables for University of Hawaii by 2035
 - Makes the University of Hawaii system the first university in the nation to set a goal of being 100 percent renewable by 2035.
 - Will save the university on electricity costs, which will translate to tuition savings for students.
- Act 100 Relating to Energy: Hawaii's first community renewable program
 - Establishes the first statewide community renewables program in the country, so that any resident can invest in an off-site solar photovoltaic or other renewable project, like a large-scale solar farm, and get the same credit as residents with rooftop installations currently receive on their electric bills.
 - Democratizes renewable energy by letting renters and condo owners buy into Hawaii's clean energy transformation.
 - Complements the Green Energy Market Securitization (GEMS) Program to finance green infrastructure so it is accessible to a wider audience, particularly renters, non-profits, and homeowners who can't otherwise afford to invest in green energy. Consumers who borrow from GEMS will see savings on their electric bills immediately, with no money down.

Hawaii-Okinawa Memorandum of Cooperation

On July 10, in a ceremony and clean energy forum featuring experts and dignitaries from America and Japan, Governor Ige and Governor Takeshi Onaga of the Prefecture of Okinawa signed an extension of the Hawaii-Okinawa Memorandum of Cooperation for Clean and Efficient Energy Development and Deployment from July 2015 to June 2020.

Okinawa and Hawaii both share geographical and climate conditions and are isolated archipelagos in a tropical/subtropical climate with energy networks that are highly dependent on fossil fuels. Both have emerged as leaders in reducing fossil fuel dependence by actively deploying renewable energy and energy efficiency measures. The Memorandum of Cooperation aims to expand existing strong activities in technology research and development. Signatories are the U.S. Department of Energy; Japan Ministry of Economy, Trade, and Industry; the State of Hawaii; and the Prefecture of Okinawa.

DID YOU KNOW?



Hawaii is back among the top ten clean tech states according to the 2015 U.S. Clean Tech Leadership Index. Key to our state's hurdle forward from #19 in 2010, is HB623 (Act 97), which sets the nation's first statewide 100% renewables target (by 2045). *2015 U.S. Clean Tech Leadership Index, June 2015 (Clean Edge)*

ENLIGHTENING NEWS AND ARTICLES



[Hydro as energy storage has huge potential in Hawaii, expert says](#)
(Pacific Business News, 7/27/15)

[Businesses recognized for being green](#)
(KITV, 7/17/15)

[Hawaii launches financing program for PV systems](#)
(KITV, 7/2/15)

[Hawaii wrestles with vagaries of solar power](#)
(Wall Street Journal, 6/28/15)

[Ige opposes NextEra deal](#)
(Honolulu Star-Advertiser, 6/20/15)

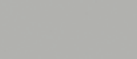
[Electric car incentive program considered](#)
(Honolulu Star-Advertiser, 6/20/15)

[Governor Ige signs bill setting 100 percent renewable energy goal for state](#)
(Hawaii News Now, 6/8/15)

[New study ranks Hawaii among top 10 states for renewable energy](#)
(Pacific Business News, 6/2/15)

[Renewable-energy plan for Hawaii's public schools takes big step](#)
(Pacific Business News, 5/22/15)

UPCOMING EVENTS



[7th Annual Asia Pacific Resilience Innovation Summit & Expo](#), August 24-26, 2015, Hawaii Convention Center

HSEO is proud to be a Partner and Supporting Organization of the 2015 Asia Pacific Resilience Innovation Summit and Expo. The 7th annual summit will convene business, technology, and policy leadership across the global resilience pillars of energy, agriculture, water and security. These joint events collaboratively seek out new solutions for the vanguard communities facing the impact of climate change. HSEO program panels include:

- ***[Transportation Energy Solutions & Grid Modernization](#)***
- ***[Community Renewables](#)***

As a member of HSEO's network, register with the promotional code **15HSEO10** to receive a 10% discount on the conference fee.